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**Sent:** 1/30/2019 11:56:47 PM  
**To:** Burgess, Karen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9085a27e8d724564890f33d47c72d9d1-Burgess, Karen]  
**CC:** STURDEVANT Debra [Debra.STURDEVANT@state.or.us]  
**Subject:** LCA language  
**Attachments:** LCA for Karen.xlsx

Hi Karen,

Thinking about your comments on the last Clean Water Services Variance Application we have decided to follow the suggestion for a performance based effluent limit approach. Below is the language describing the process we came up with and included in the updated technical review document. Can you please take a look at it and the attached spreadsheet and share your thoughts?

Thanks,

Spencer

### 3.3 The Highest Attainable Effluent Condition

As discussed above, DEQ has determined that it will express the highest attainable effluent condition as 1) the Level Currently Achievable (LCA), and 2) the adoption and implementation of a Mercury Minimization Program. The LCA is the effluent condition achievable using the currently installed treatment system that is operated at the “highest and best” condition. Establishing a permit limit based on the LCA ensures that the facility will achieve the highest effluent quality feasible with their existing treatment systems throughout the term of the variance.

According to federal regulations and guidance, and as a result of litigation on mercury issues in Michigan, the HAC assigned under a variance must be based on discharger specific data.

DEQ proposes to include a LCA-based permit limit for the Rock Creek AWWTF as a requirement of the variance. The LCA was calculated using discharge data from the Rock Creek AWWTF collected over the past five years<sup>[1]</sup> when the applicable process was being utilized. The permit limits will be expressed as a quarterly average of total mercury in nanograms/liter. Additional information on the calculation of the LCA’s is provided here and in Attachment 3.

To calculate the LCA, the DEQ uses the guidance in Appendix E of the EPA Technical Support Document (TSD) procedure for calculating a performance based effluent limit with lognormal distributions. Specifically, the TSD procedure for the calculation of the Daily Maximum Permit Limits Based on the Lognormal Distribution on page E-8 is used to calculate the LCA. All calculations will be performed pursuant to the DEQ’s IMD on rounding and significant digits. The LCA limit will be re-evaluated at least once every 5 years under a variance and can be adjusted as appropriate based on the updated monitoring data collected during the permit cycle.

The procedure selected used the 99<sup>th</sup> percentile of the log transformed data set to calculate the LCA. This procedure was selected over the Monthly Average Permit Limit Based on the Lognormal Distribution procedure (page E-9) using the 95<sup>th</sup> percentile of the same data set was chosen due to the potential amount of variation in influent mercury loading and in analytical analyses. The goal of the LCA based regulatory effluent limit is to ensure the facility continues to optimize performance with its current technology, not to create compliance and enforcement issues for short term and infrequent

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<sup>[1]</sup> DEQ will use the preceding 5 years (Q1 2013 thru Q1 2018) of effluent data, if available, since that most accurately reflects the current treatment technology, operational conditions and previous source reduction achievements, while also reflecting the variability in the effluent concentrations. If there is not sufficient data from the preceding 5 years, DEQ may use data from a longer timeframe to better understand the effluent quality, as long as the facilities and treatment operations have essentially remained the same.

excursions that are outside the control of the facility. It is also DEQ's goal to establish a method for determining LCA that will work for multiple and diverse facilities that may be covered in the future by a multiple discharger variance. This would include small communities that would have difficulty monitoring mercury more than once per quarter. For these reasons, DEQ has concluded that the approach of using the 99<sup>th</sup> percentile for the regulatory permit limit together with a performance benchmark based on the 95<sup>th</sup> percentile accomplishes these objectives. The Performance Benchmark, discussed further below, provides a link to the Mercury Minimization Program.

The LCA calculation resulted in an effluent limit of 4.1 ng/l for total mercury. The calculation data and results are presented in the graph below (Figure 6) relative to the quarterly averages of the data sets.

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